Acta Biologica Szeged. *21* (1—4), pp. 165—179 (1975)

SKELETAL REMAINS OF THE AVAR PERIOD AND 10TH CENTURY CEMETERY EXCAVATED AT RÁKÓCZIFALVA—KASTÉLYDOMB

P. LIPTÁK and ANTÓNIA MARCSIK

Department of Anthropology, Attila József University, Szeged

(Received October 15, 1974)

Abstract

72 Avar period and 9 early-Arpadian Age graves were excavated in the area of Rákóczifalva—Kastélydomb in 1962. Altogether 67 skeletal remains were found, in a worse-average state of preservation. The males are generally brachycranic, but the cranical index of the females is more variable. Their braincase (cranial vault) is orthocranic and tapeino-metriocranic, and the forehead is stenometopic. In the case of both sexes the face is generally mesoprosopic, mesene. The fossa canina is absent or shallow. The orbits are usually hypsiconch, and the nasal index is mesorrhine (in the females chamaerrhine). The stature is very variable. The number of anthropological finds suitable for taxonomic analysis is only twelve, of which nine individuals are of Europid character. Within these, the Cromagnoids (crC) predominate, with various proportions of the Mongolid racial component. Three resp. four individuals could be classified as Mongolids. In one case the Baikal race (b) could be diagnosed and in another the Saianic (sa), while for two individuals the Mongolid component could not be determined in detail. In the nine early Arpadian-Age graves only two skeletons are in a good state of preservation; one of them shows Mediterranean, and the other one Mongolid character. The Avar period and 10th century cemetery at Rákóczifalva—Kastélydomb is important as representing original Avars who immigrated here from the central regions of Asia, while in addition the presence of the Mongolid element in the 10th century is evidence of the survival of the Avar population.

Introduction

Excavations were carried out by Zsolt Csalog in the area called Rákóczifalva—Kastélydomb, not far from Szolnok, in May and June 1962. He uncovered altogether 178 graves, including early and late Bronze-Age and Gepid graves, 72 Avar-period and nine early Arpadian-Age (10th century) graves (CSALOG, 1963). The archaeological elaboration of the Avar period graves is being performed by László Selmeczi, archaeologist of the Museum in Szolnok; special thanks are due to him for placing his manuscript at our disposal. The material of 64 graves has passed into the collection of the Department of Anthropology at Attila József University. In three cases there were double burials (graves 32, 38 and 124), and therefore the number of finds to be elaborated has risen to 67. 12 of the 43 crania are in a good state of preservation (i.e. measurable), and 31 are fragmentary (Table 1). The great majority of crania are associated with skeletons (38 cases), but there are crania without postcranial skeletons (5 cases). It appears from the data of Table 1 that the preservation of the Avar period skeletons unearthed in the area of Rákóczifalva—Kastélydomb is worse than the average.

Table 1. Rákóczifalva-Kastélydomb, Avar period, skeletal material.

Characterization of the material		In. I.	Inf. II.	Juv.	Ad.	Mat.	Sen.	Total
Fragmentary (unmeasured)	Males	—	—	—	2	8	1	11
	Females	—	—	1	6	6	—	13
	Undeterminable.....	1	6	—	—	—	—	7
	Total:	1	6	1	8	14	1	31
Well preserved (measured)	Males	—	—	—	1	6	—	7
	Females	—	—	—	3	2	—	5
	Total:	—	—	—	4	8	—	12
	Sum-total:	1	6	1	12	22	1	43

General characterization of the Avar-period population

In the elaboration of the skeletal material, we have made use of MARTIN's method (1928). From the results in Tables 2 to 4, a general characterization of the anthropological material of the Avar-period cemetery at Rákóczifalva—Kastélydomb, relating to both sexes, can be given in the following way; owing to the low number of cases, no parameters have been calculated.

The crania of the males exhibit a brachycranic tendency, while in the case of the females lower and higher values than this occur as well. The cranial profile in the vertical norm is ovoid and pentagonoid, respectively. The braincase is generally orthocranic and tapeino-metriocranic, respectively. The protuberantia occipitalis externa is of degrees 0 and 1; the mastoid process of the males is of medium size, and that of the females is small. On the basis of the transversal-frontoparietal index the cranium is stenometopic and metriometopic; while in the case of the males the forehead slopes somewhat, in the females it is steep. The glabella is of degrees 1 and 2, respectively. Taking into consideration the cranial capacity values, the males are aristencephalic, and the females euencephalic but, due to their fragmentary state, only in two cases each. The face of the males is usually mesoprosopic, mesene; that of the females is similar, but hyperleptoprosopy also occurs. The fossa canina is absent or shallow. In both sexes the orbits are hypsiconch, being a little square or rounded. As regards of the value of the nasal index, mesorrhiny is more characteristic of the males, and chamaerrhiny of the females. The nasal spine is generally missing, but if found it may show almost every degree. The facial angle profile is uniformly orthognathous, alveolar prognathism manifesting itself only rarely. The stature is very variable for both sexes; a tall stature is comparatively frequent in both males and females (Table 4).

Sutura metopica occurs in two cases (graves 19 and 154) and lambdoid sutural bones (grave 92) and os apicis (grave 124) in one case each. Individual measurements and indices are to be found in Tables 2 and 3, and the measurements of long bones in Table 4.

Table 2. Rákóczifalva-Kastélydomb, Avar period; measurements, indices and morphologic characters. — Males (1).

No. of measurements (Martin)	Measurements and indices	7. 3519 Ad.	28. 2532 Mat.
1.	Glabello-occipital length	177	—
1c.	Metopion-occipital length	176	—
5.	Basion-nasion length	—	—
8.	Maximum breadth of cranium	137	—
9.	Minimum frontal breadth	93	90
17.	Basion-bregma height	—	—
20.	Porion-bregma height	117	—
32/1-a	Frontal angle	49°	—
38.	Calculated cranial capacity	—	—
40.	Basion-prosthion length	—	—
45.	Bizygomatic breadth	—	135
46.	Maxillar breadth	101	95
47.	Total facial height	(123)	(119)
48.	Upper facial height	72	70
51.	Orbital breadth	38	36
52.	Orbital height	31	33
54.	Nasal breadth	26	27
55.	Nasal height	51	52
62.	Palatal length	42	48
63.	Palatal breadth	37	35
65.	Bicondylar-diameter	128	—
66.	Bigonial-diameter	103	—
69.	Mental height	37	37
70.	Ramus height	75	66
71.	Ramus breadth	29	29
72.	Total facial angle	85°	—
8:1	Cranial index	77,4	—
17:1	Length-height index	—	—
17:8	Breadth-height index	—	—
9:8	Transvers.-frontopar. index	67,9	—
47:45	Facial index	—	(88,2)
48:45	Upper facial index	—	51,8
52:51	Orbital index	81,6	91,7
54:55	Nasal index	50,9	51,9
63:62	Palatal index	88,1	72,9
Vertical norm		Pent.	—
Glabella		3	3
Protuberantia occipitalis externa		1	—
Fossa canina		3	2
Spina nasalis anterior		—	4
Prognathia alveolaris		2	1
Calculated stature		160	166
Taxon		m-moid	(moid)

Males (2).

50. 3553 Mat.	54. 3556 Mat.	91. 3581 Mat.	92. 3582 Mat.	154. 3630 Mat.	No. of measurements (Martin)
—	177	—	172	180	1.
—	174	—	166	178	1c.
—	104	—	—	98	5.
145	146	—	147	150	8.
84	103	100	103	100	9.
—	143	—	—	129	17.
115	120	—	117	110	20.
53°	53°	—	50°	50°	32/1-a.
—	1503	—	—	1449	38'
—	102	—	—	98	40.
147	(143)	146	(144)	141	45.
102	103	103	101	109	46.
128	126	—	118	—	47.
76	78	75	75	76	48.
38	43	40	43	39	51.
34	36	34	39	31	52.
25	28	28	24	27	54.
56	54	55	54	57	55.
48	52	—	48	46	62.
43	41	—	42	—	63.
—	132	—	—	—	65.
—	111	132	118	—	66.
38	34	—	31	37	69.
66	76	—	73	68	70.
29	34	—	27	36	71.
90°	85°	—	85°	86°	72.
—	82,5	—	85.5	83,3	8:1
—	80,8	—	—	71,7	17:1
—	97,9	—	—	86,0	17:8
57,9	70,5	—	70,1	66,7	9:8
87,1	(88,1)	—	(81,9)	—	47:45
52,5	55,2	51,4	52,1	53,9	48:45
89,5	83,7	85,0	90,7	79,5	52:51
44,6	51,8	50,9	44,4	47,4	54:55
89,6	78,8	—	87,5	—	63:62
Ovoid	Ovoid	—	Ovoid	Ovoid	Vert. norm.
4	3	3	4	3	Glabella
—	0	—	0	0	Prot. occ. ext.
2	3	2	2	2	Fossa canina
—	3	—	—	—	Spina n. ant.
1	2	1	1	3	Progn. alv.
170	—	—	170	—	Stature
crC-moid	crC-moid	crC-x	crC-moid	crC-moid	Taxon

Table 3. Rákóczifalva-Kastélydomb, Avar period; measurements, indices and morphologic characters. — Females.

No. of measurement (Martin)	19. 3225 Ad.	33. 3538 Ad.	35. 3540 Mat.	78. 3570 Mat.	124. 3610 Ad.
1.	—	175	179	176	166
10.	—	169	175	175	161
5.	—	93	—	93	—
8.	(143)	(140)	131	135	142
9.	97	90	92	95	90
17.	—	127	—	126	—
20.	106	—	110	110	115
32/1-a.	50°	48°	50°	43°	55°
38.	—	1275	—	1222	—
40.	—	95	—	90	—
45.	139	—	(117)	122	134
46.	107	97	93	92	101
47.	121	115	(114)	—	114
48.	71	69	66	77	67
51.	42	39	34	39	39
52.	34	34	31	34	32
54.	27	25	23	26	27
55.	49	48	45	54	51
62.	44	44	45	45	48
63.	41	39	—	35	34
65.	120	—	—	—	—
66.	100	101	—	—	93
69.	32	32	35	32	31
70.	62	64	63	71	66
71.	33	31	32	28	34
72.	90°	88°	90°	88°	86°
8:1	—	80.0	73.2	76.7	85.5
17:1	—	72.6	—	71.6	—
17:8	—	90,7	—	93.3	—
9:8	67.8	64.3	70.2	70.4	63.4
47:45	87.1	—	97.4	—	85.1
48:45	51.1	—	56.4	63.1	50.0
52:51	80.9	87.2	91.2	87.2	82.1
54:55	55.1	58.3	51.1	48.1	52.9
63:62	93.2	88.6	—	77.8	77.1
Vert. norm.	—	Ovoid	Pent.	Pent.	Ovoid
Glabella	2	1	2	1	1
Prot. occ. ext.	—	0	—	0	2
Fossa canina	1	2	1	1	2
Spina n. ant.	2	2	—	—	3
Prog alv.	1	2	1	2	1
Stature	159	155	—	159	160
Taxon	sa	br-moid	b—x	m—x	p-moid

Table 4. Rákóczfalva-Kastélydomb, measurements of long bones and the calculated stature.

No. of grave	No. of inventory	Sex	Femur				Tibia		Humerus		Radius		Statu-re
			Max. length		Max. lenght in nat. position								
			right	left	right	left	righ	left	righ	left	righ	left	
Avar period													
7.	3519	♂	432	430	430	426	—	—	—	317	—	—	160
19.	3525	♀	423	423	420	420	—	—	304	295	225	230	159
28.	3532	♂	450	450	448	441	370	372	—	310	248	—	166
32/a.	3536	♀	—	460	—	455	—	—	322	318	—	—	161
33.	3538	♀	408	410	405	408	345	343	298	—	—	—	155
50.	3553	♂	463	465	450	460	390	387	335	334	262	260	170
68.	3564	♂	465	465	460	460	394	394	—	—	—	—	171
78.	3570	♀	443	445	438	438	355	355	320	315	235	—	159
92.	3582	♂	482	487	480	482	—	390	335	—	253	253	170
111.	3600	♂	415	415	410	410	363	360	—	—	—	—	162
118.	3604	♂	442	445	438	440	—	—	—	325	250	250	166
124.	3610	♀	410	413	408	409	348	350	305	298	226	223	160
10th century													
20.	3526	♀	405	405	403	403	340	340	295	288	228	230	154
25.	3530	♀	404	408	402	404	330	333	306	306	223	220	154

Taxonomic analysis of the Avar period skeletal remains

As compared to the number of excavated crania and postcranial skeletons, unfortunately only very few of the anthropological finds are in a good state of preservation and suitable for taxonomic analysis: seven males and five females, i.e. twelve individuals altogether. Taxonomic analysis was based on the skeletal systematics of one of the authors (LIPTÁK, 1965; 1971). Nine of the twelve individuals studied are *Europids* but with more or less Mongolid elements. In the group of Europids tall-statured but brachycranic Cromagnoids (crC) predominate; these occurred only among the males (Fig. 1), almost without exception with a certain proportion of some Mongolid racial component. The proportion of the gracile Mediterranean component (m) is subordinate in both sexes, as are those of the Pamirian (p) and the undetermined brachycranic components in the females (Figs. 2 and 3).

Three (resp. four) individuals could be classifield in the group Mongolids. On the basis of the craniosystematics already well-elaborated for the Avars in Hungarian territory (LIPTÁK, 1957; 1959), in one of the cases (grave 35) the dolichocranic protomongolid Baikal (b) race, could be recognized, and in the other case (grave 19) the low-faced Mongolid race. In the Soviet anthropological literature, the latter has been named "Katanga type", but since this is also a river name in Africa, it

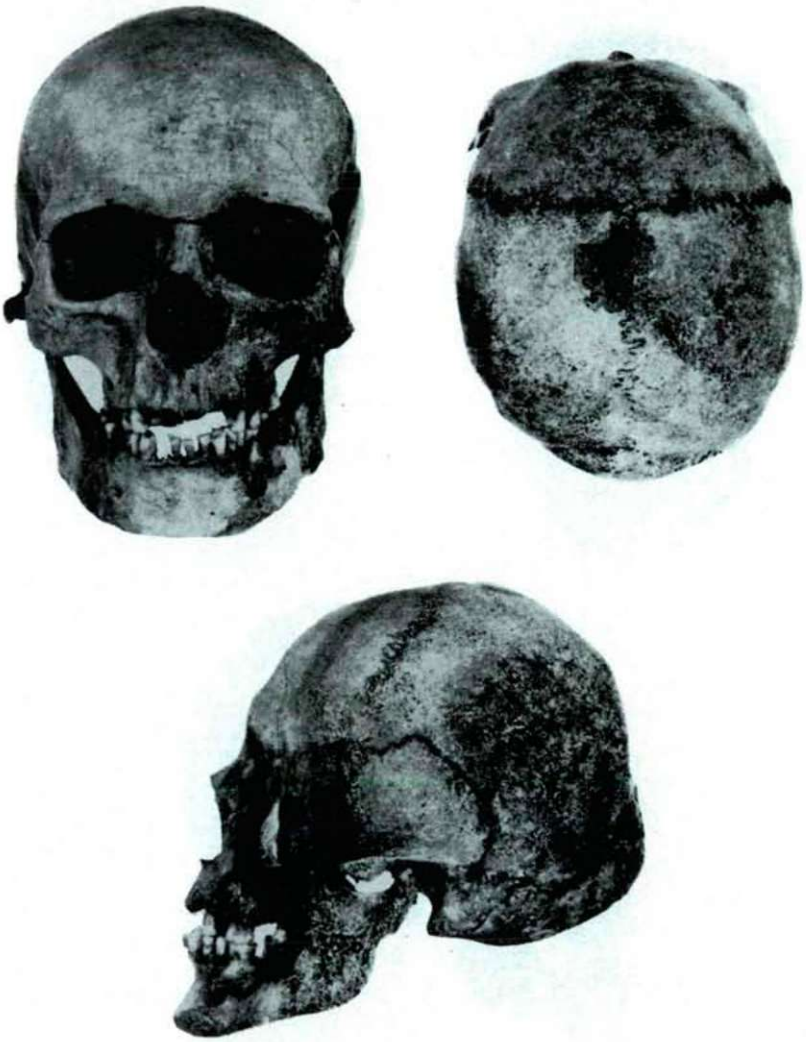

Fig. 1. Rákóczifalva—Kastélydomb, Avar period, grave 54 (3556), male crC-moid.

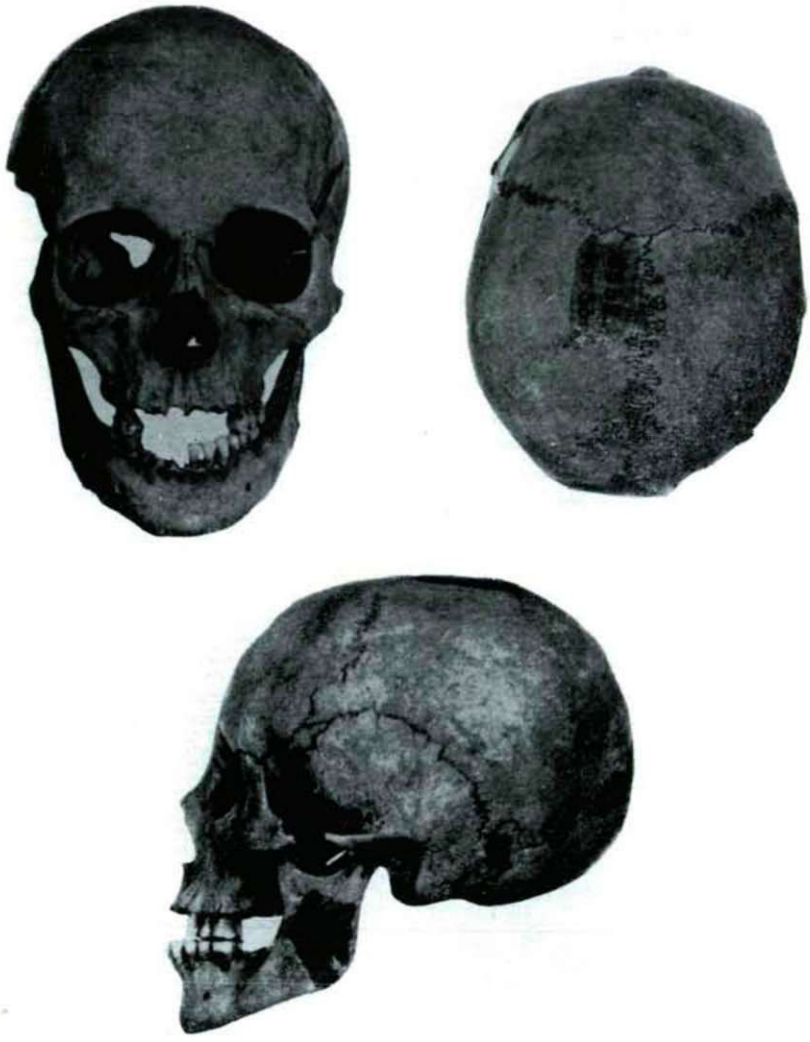

Fig. 2. Rákóczifalva—Kastélydomb, Avar period, grave 33 (3538), female, br-moid.

Fig. 3. Rákóczifalva—Kastélydomb, Avar period, grave 124 (3610), female, p-x(moid).

Table 5. Comparison of some series of the Avar period.

Place of excavation	Author date of publication	Number of suitable for metrical analysis	Distrbution of cranial index				Major taxons
			70—75	75—80	80—85	85—x	
Áporkai-Ürbőpuszta	Lipták 1951	Male: 7 Female: 6	— —	2 4	4 4	— —	brachycephals, nordoid, cromagnoid
Kiskőrös-Vágóhíd	Nemeskéri 1955	Male: 7 Female: 2	— —	1 —	4 2	— —	saianic, central-asiatic
Kiskőrös-Pohibujmackó	Lipták 1956	Male: 7 Female: 3	— —	3 2	3 1	— —	cromagnoid, brachycephals, mongoloid
Rákóczifalva-Kastélydomb	—	Male: 7 Female: 5	— 1	1 1	2 1	1 1	cromagnoid, brachycephals, saianic, bajkal

may give rise to misunderstanding. In Asia, this anthropological component is frequent among the populations living in the Saian-mountains: the Saianic Mongolid component has been mentioned by Soviet anthropologists; accordingly, instead of the designation "Tungid type", which is wide-spread in the Hungarian anthropological literature, the name Saianic (sa) race seems advisable (Fig. 4) because of the fragmentary condition of the cranium it is not oriented in the Frankfurt horizontal plane. In a single case (grave 28) the Mongolid character is unquestionable but, due to the defective cranium, a more exact determination is not possible. There was a Mongolid cranium in the fragmentary, i.e. unmeasured material, but this was not determined more closely (grave 39). Both above mentioned racial components are characteristic of the Avar period cemeteries in Hungary.

The number of crania in a good state of preservation being only twelve, this small series is hardly suitable for drawing far-reaching conclusions. The cemetery is important anthropologically, as the material in a good state of preservation clearly indicates its definite Mongolid or Europo-Mongolid character. This cemetery not only stems from the Avar-period but also involves Avars immigrating to the Carpathian Basin from the inner regions of Asia.

A segregation of groups within the cemetery is not possible on the basis of the anthropological material. A comparison with other Avar-period cemeteries such as those at Ürbőpuszta (LIPTÁK, 1951), Kiskőrös—Vágóhíd (NEMESKÉRI, 1955) and Kiskőrös—Pohibujmackó (LIPTÁK, 1956) — is made possible by Table 5.

Apart from the 72 Avar-period graves, nine early Arpadian-Age (10th century) graves were found as well. From these, two skeletons are in a good state of preservation (Table 6), and seven are fragmentary ones. Taxonomic analysis indicates the individual from grave 20 to be predominantly Mediterranean (Fig. 5), while that from grave 25 shows Mongolid character, not determined more closely (Fig. 6). The presence of the Mongoloid element is proving that the Avar population survived in the 10th century, as has been proved in the case of the cemetery at Szarvas—Kákapuszta—Kettőshalom (LIPTÁK—MARCSIK, 1970).

Table 6. Rákóczifalva-Kastélydomb, 10th century; measurements, indices and morphologic characters. — Females.

No. of measurements (Martin)	Measurements and indices	20. 3526 Ad.	25. 3530 Ad.
1.	Glabello-occipital length	176	170
1c.	Metopion-occipital length	177	169
5.	Basion-nasion length	96	92
8.	Maximum breadth of cranium	132	137
9.	Minimum frontal breadth	88	94
17.	Basion-bregma height	131	126
20.	Porion-bregma height	110	108
32*f*1-a.	Fontal angle	48	50
38.	Calculated cranial capacity	1258	1240
40.	Basion-prosthion length	92	85
45.	Bizygomatic breadth	124	127
46.	Maxillar breadth	93	91
47.	Total facial height	107	112
48.	Upper facial height	64	71
51.	Orbital breadth	39	38
52.	Orbital height	31	33
54.	Nasal breadth	22	26
55.	Nasal height	44	50
62.	Palatal length	41	39
63.	Palatal breadth	36	34
65.	Bicondylar-diameter	119	111
66.	Bigonial-diameter	96	90
69.	Mental height	28	31
70.	Ramus height	65	60
71.	Ramus breadth	32	28
72.	Total facial angle	85°	88°
8:1	Cranial index	75,0	80,6
17:1	Length-height index	74,4	74,1
17:8	Breadth-height index	99,2	91,9
9:8	Transvers.-frontopar. index	66,7	68,6
47:45	Facial index	86,3	88,1
48:45	Upper facial index	51,6	55,9
52:51	Orbital index	79,5	86,8
54:55	Nasal index	50,0	52'0
63:62	Palatal index	87,8	87,2
	Vertical norm	Pent.	Ovoid
	Glabella	1	2
	Protuberantia occipitalis externa	0	0
	Fossa canina	2	3
	Spina nasalis anterior	2	2
	Prognathia alveolaris	1	2
	Calculated stature	154	154
	Taxon	m-x	moid

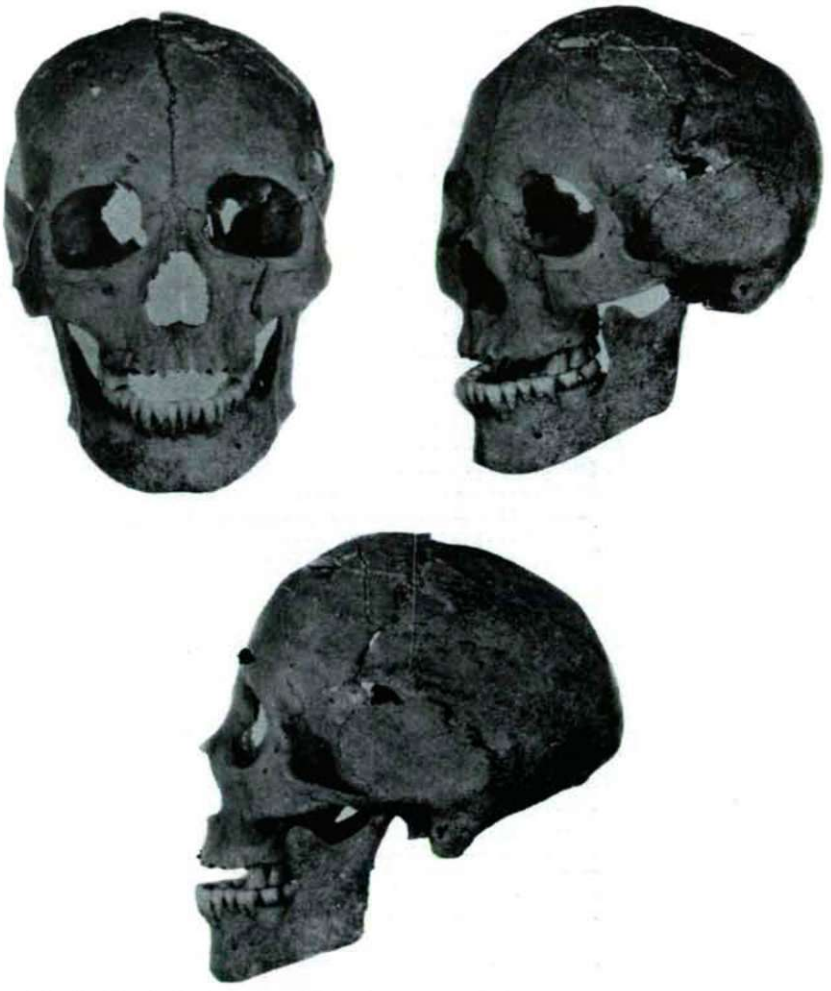

Fig. 4. Rákóczifalva—Kastélydomb, Avar period, grave 19 (3526), female, sa.

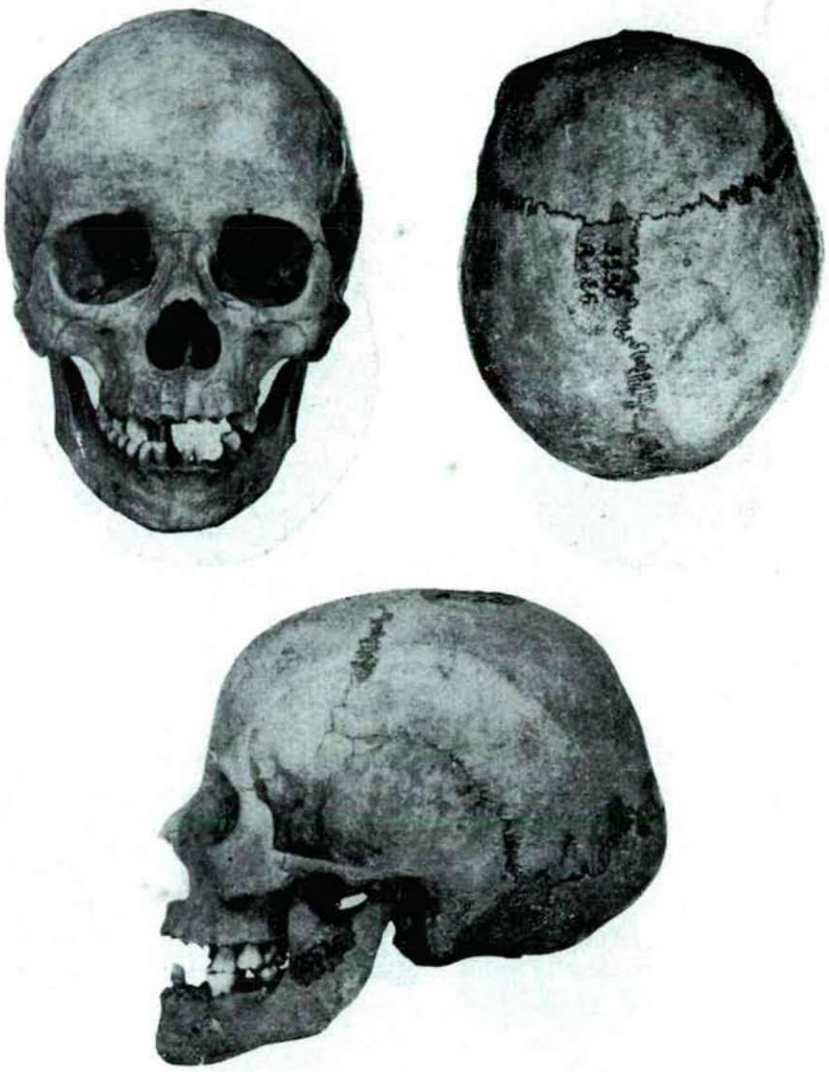

Fig. 5. Rákóczifalva—Kastélydomb, 10th century, grave 20 (3526), female, m-x.

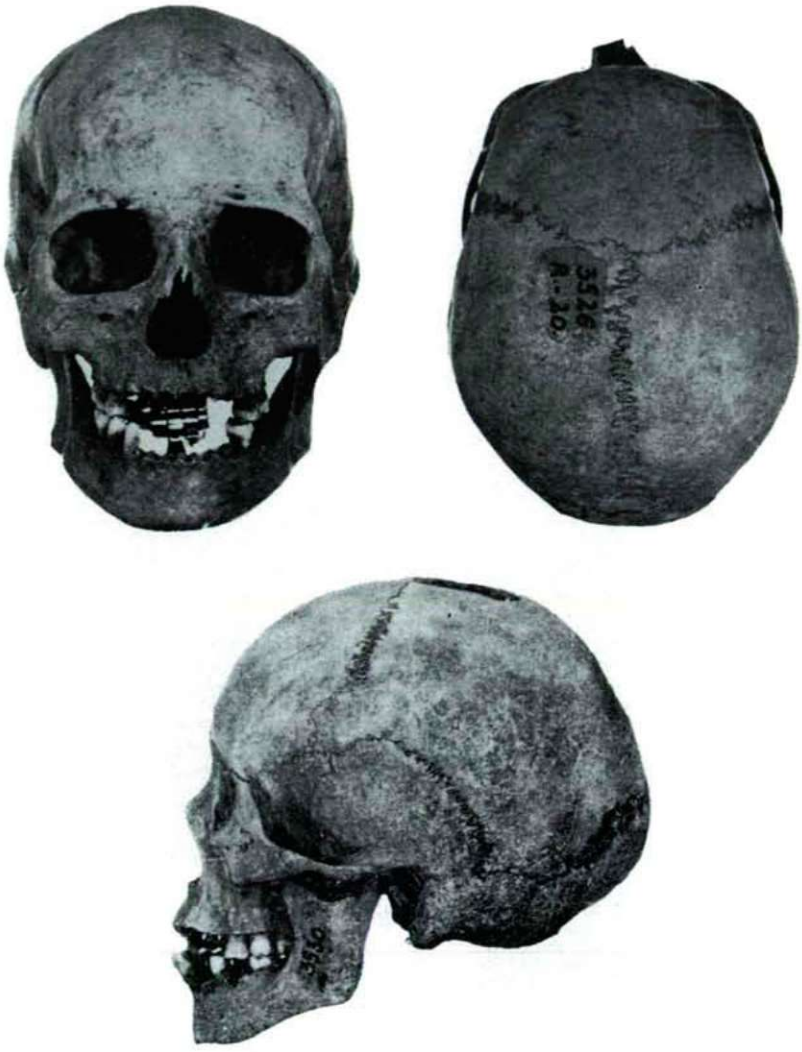

Fig. 6. Rákóczifalva—Kastélydomb, 10th century, grave 25 (3530), female, moid.

References

CSALOG, Zs. (1963): Rákóczifalva—Kastélydomb (in Archäeologische Forschungen im Jahre 1962).— Arch. Ért. *90*, 298.

LIPTÁK, P. (1951): Étude anthropologique du cimetière avare d'Áporkaiürbőpuszta. — Ann. Hist. — Nat. Mus. Nat. Hung. I_1 232—259.

LIPTÁK, P. (1956): Contributions à l'anthropologie des temps avars de la région de Kiskőrös. — Crania Hung. *1*, 47—52.

LIPTÁK, P. (1957): Awaren und Magyaren im Donau-Theiss Zwischenstromgebiet. — Acta Arch. Hung. *8*, 201—208.

LIPTÁK, P. (1959): The "Avar period" Mongolids in Hungary. — Acta Ach. Hung. *10*, 269—272.

LIPTÁK, P. (1965): On the taxonomic method in paleoanthropology (historical anthoropology). — Acta Biol. Szeged *11*, 169—184.

LIPTÁK, P. (1971): Embertan és emberszármazástan (Anthropology and human origins). 2nd ed. — University texbook, Budapest.

LIPTÁK, P.—MARCSIK, A. (1970): Skelettreste von Szarvas—Kákapuszta—Kettőshalom. Zur Frage der Awarischen—Altungarischen Verbindungen. — MFMÉ. 45—57.

MARTIN, R. (1928): Lehrbuch der Anthropologie. 2nd ed. Jena.

NEMESKÉRI, J. (1955): Étude anthropologique des squelettes du clan princier avar découverts au cimetière de Kiskőrös—Vágóhíd. (in LÁSZLÓ, GY.: Études archéologiques sur l'histoire de de la société des Avars.) — Arch. Hung. *34*, 189—210.

Address of the authors:
Prof. Dr. P. LIPTÁK
Dr. ANTÓNIA MARCSIK
Department of Anthropology,
A. J. University, H—6701 Szeged,
P. O. Box 428, Hungary